LEAPS INNOVATION

LEAPS-INNOV

LEAPS pilot to foster open innovation for accelerator-based light sources in Europe

Industry opportunities in light source infrastructures

1st December 2023, Cerdanyola de Vallès, Barcelona, Spain

Alejandro Sánchez, ALBA Synchrotron

LEAPS-INNOV Industry work package co-leader

This project has received funding from the European Union´s Horizon 2020 research and innovation programme under grant agreement No. 101004728

LEAPS League of European Accelerator-based Photon Sources

LEAPS
since 2017

The League of European Accelerator based-Photon Sources (LEAPS) is the largest consortium of analytical facilities world-wide and further expanding its service to an interdisciplinary European user community

19 synchrotrons and FELs - **16** institutions - **10** countries

> 300 operating end stations

> 1.000.000 h beamtime /year

> 5.000 publications/year

> 15 spin off companies

> 35.000 users from all of EU & beyond researchers from all research and industry areas

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https://leaps-initiative.eu/about/leaps-documents/

SESAME LENS Canadian Light Source Centre canadien de rayonnement synchrotron ESUO EUROPEAN SYNCHROTRON AND FEL USER ORGANISATION

LEAPS

League of European Accelerator-based Photon Sources

14 Synchrotrons

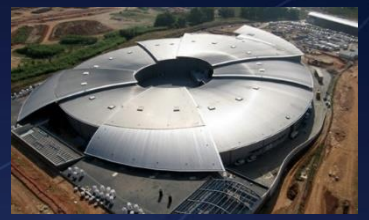
ASTRID, BESSY II, DAFNE, MAX IV, PTB, SOLARIS < 2 GeV

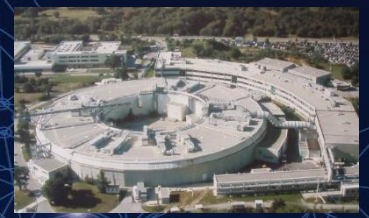





ESRF & PETRA III 6 GeV


ALBA, DIAMOND, ELETTRA, MAX IV, SLS, SOLEIL 2-3 GeV






6 Free Electron Lasers

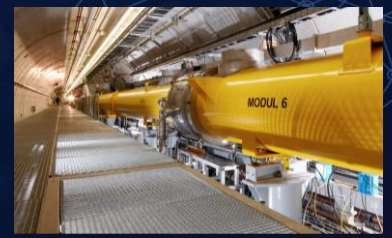
European XFEL

FERMI

FELIX

SwissFEL

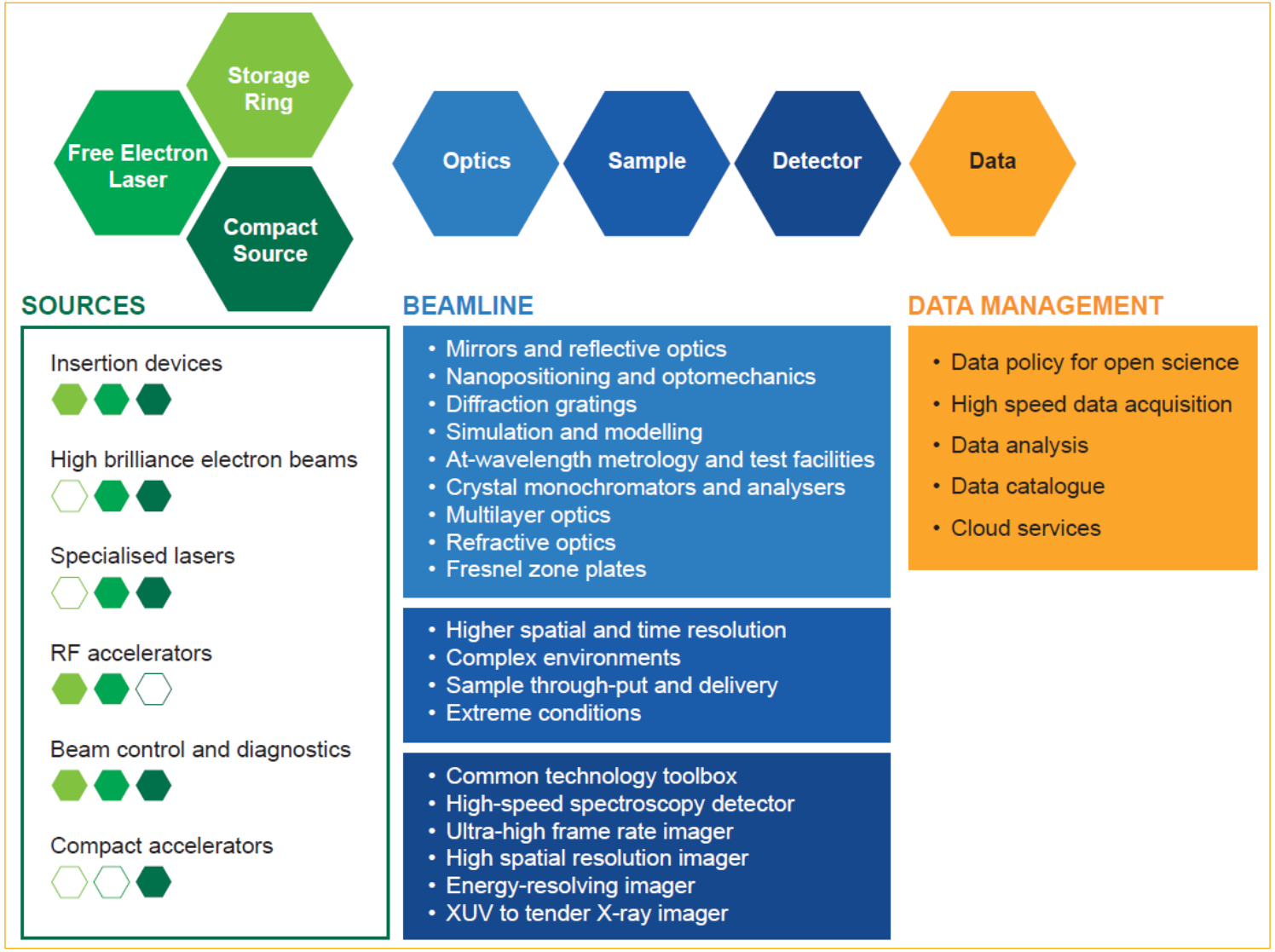
FLASH



ELBE

LEAPS technology roadmap

LEAPS technology roadmap – 2019, updated in 2022



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https://leaps-initiative.eu/

LEAPS-INNOV – overview

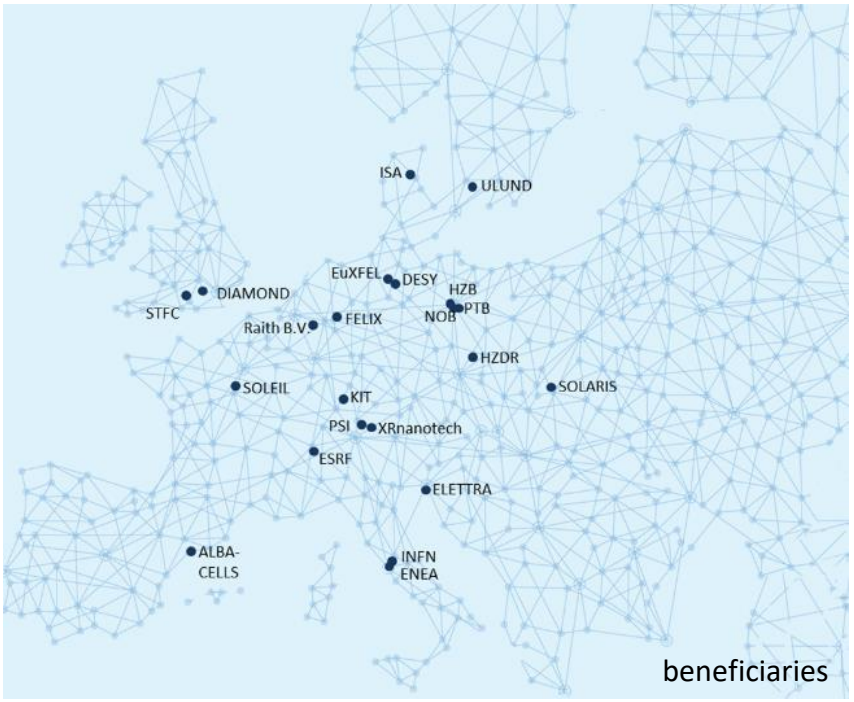
- **Implement the first projects of LEAPS roadmap**
- **Six key technology Work Packages (WP)**
- **WP Outreach towards industry**
- **WP Outreach towards user community**

Consortium:
- 22 beneficiaries (all 16 LEAPS members)
- 3 SMEs
- 3 technology partners (ENEA, KIT, STFC)
- > 50 European industrial partners (> 77% are SMEs)

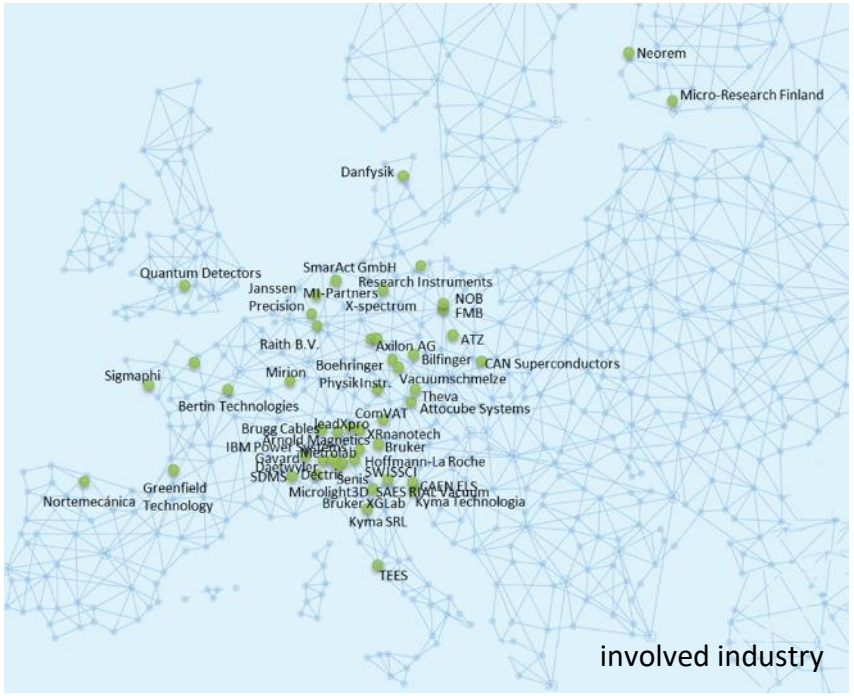
Budget 10 million EUR
with additional own contribution of
8.3 million EUR

Timeline 4 years, started **April, 2021**

Coordinator DESY



beneficiaries



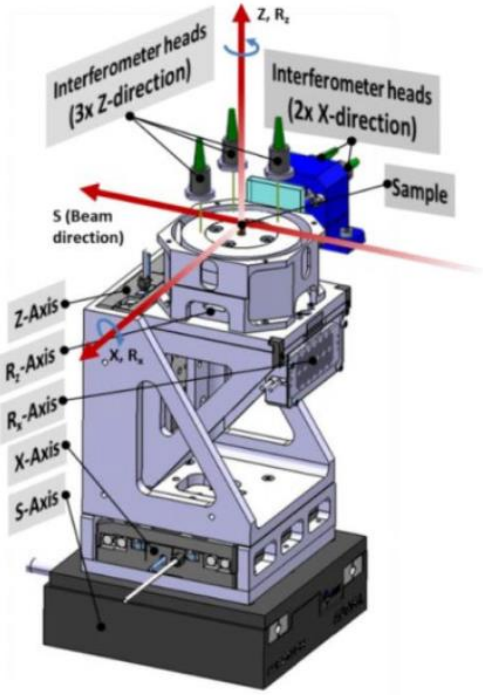
involved industry

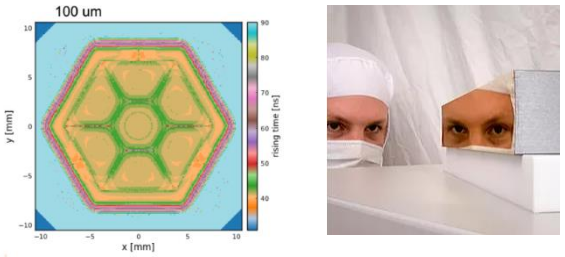
Work Packages

Open innovation for accelerator-based light sources in Europe

Visit https://www.leaps-innov.eu/

WP1	Project Management and Dissemination
WP2 XAFS-DET	High throughput Germanium X-ray spectroscopy detector
WP3 SuperFlat	Production of high-performance X-ray mirrors, including PCP
WP4 NeXtgrating	e-beam lithography for soft X-ray gratings
WP5 POSIT	New positioning and scanning systems for speed and accuracy
WP6 LIDs	Novel insertion devices
WP7 DATA	Data reduction and compression
WP8 INDUSTRY	Industrial Innovation through Light Sources
WP9 CO-CREATION	Innovation by Co-creation towards Global Challenges





Bringing together technology innovation and people

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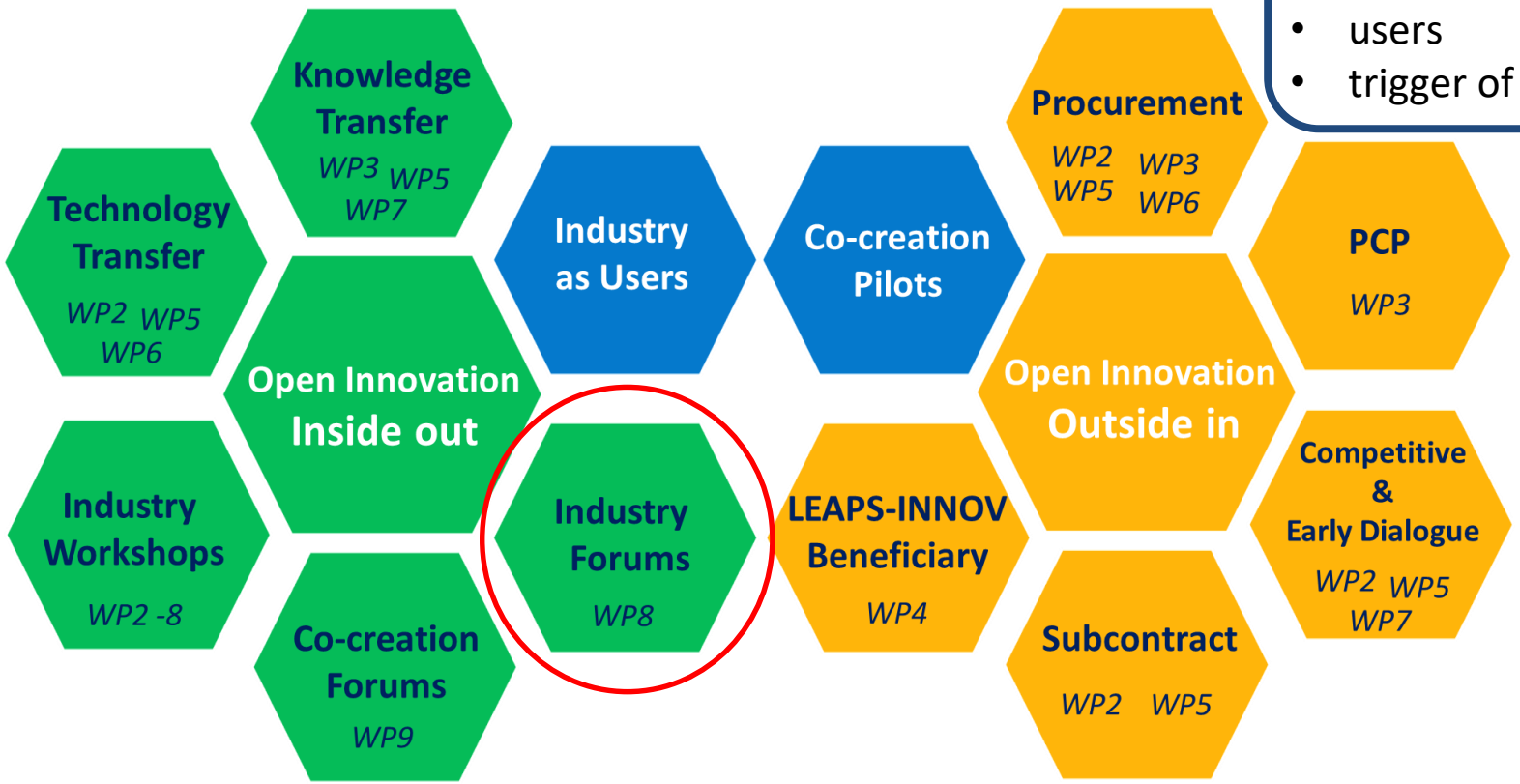
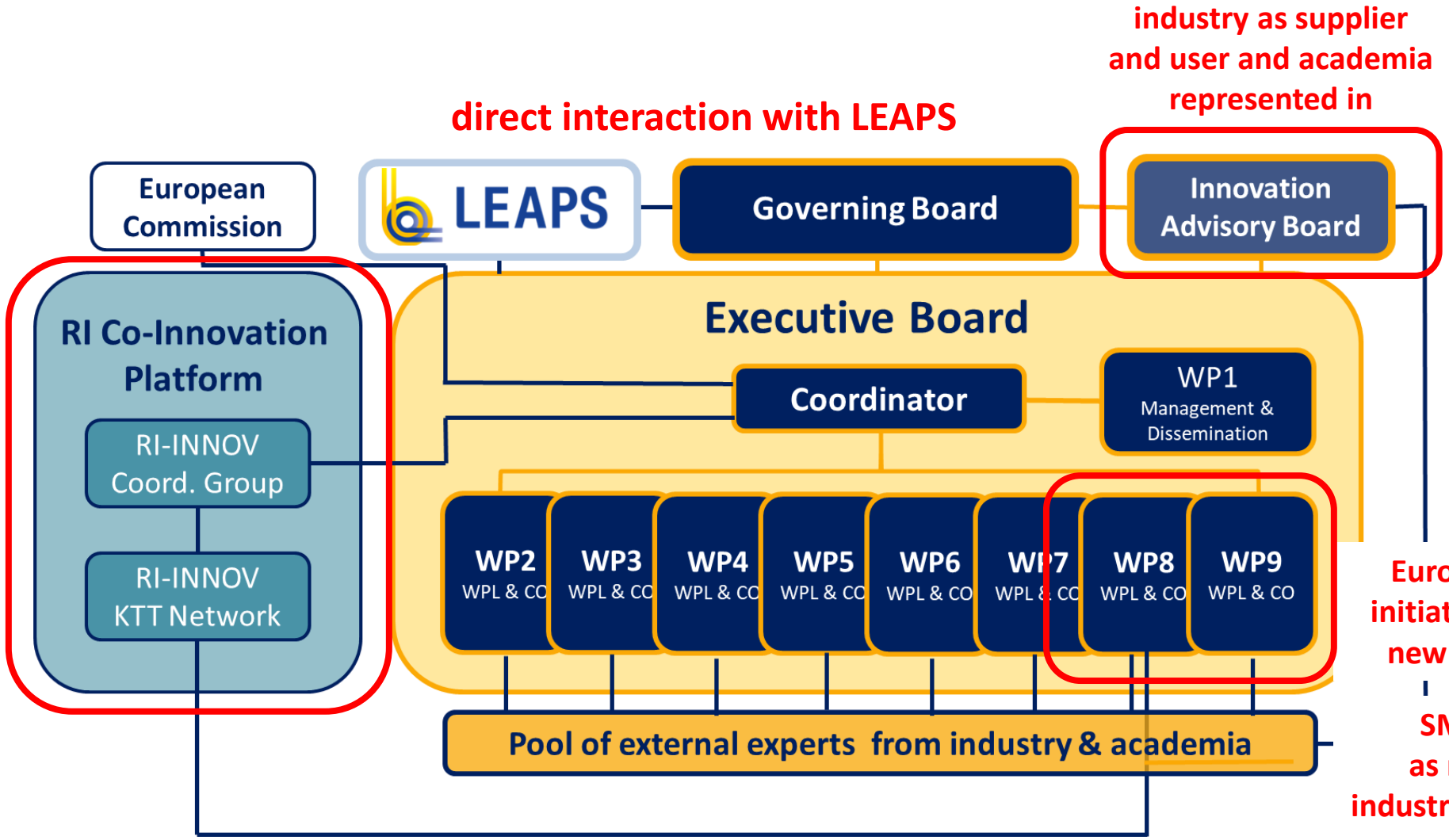
LEAPS-INNOV tools to foster technological development with early industry involvement

Involve **industry** in innovation for SR & FELs in Europe as
- suppliers
- users
- trigger of science



LEAPS-INNOV external communication



All H2020 Innovation- Pilots

iFAST

AIDA innova

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“Foster open innovation for accelerator-based lightsources in Europe”

https://www.leaps-innov.eu

Tak
Tack
Thanks
Bedankt
Danke
Dziękuję
Merci
Grazie
Gracias
شكك

This project has received funding from the European Union´s Horizon 2020 research and innovation programme under grant agreement No. 101004728